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ENTOMOLOGY.¹

Two more new species of *Lecanium*.—(1). *Lecanium pseud-hesperidum*, Ckll., n. sp.—♀ scale of the general shape and appearance of *L. hesperidum*, but (at least in spirit) firm in texture. Length $6\frac{1}{2}$, breadth $3\frac{1}{2}$, height 1 mm. Color reddish-brown, moderately shiny, pitted but not ridged or grooved; rows of apparently glandular patches on the dorsum. This description is from a ♀ packed with eggs; empty ♀, from which the eggs have hatched, are sometimes rather larger, and appear whitish or nearly colorless.

Derm colorless, very distinctly tessellated, the tessellations not containing gland-spot. Rather large gland-pits scattered at irregular intervals.

Margin with slender spines, often curved, never branched. Lateral incisions each with a stout blunt brown spine, and a second rudimentary or very small. Anal plates small, about $1\frac{1}{2}$ mm. from hind end. Anogenital ring with numerous hairs. Mentum 2-pointed, rounded at end.

Legs ordinary; coxa and trochanter each with a hair at end; tarsus scarcely if at all shorter than tibia. Claw stout, hooked at tip. Digitules ordinary, well-developed, slender but not filiform.

Antennæ very pale brownish, well-formed, but the joints indistinct, 6 joints, 3 much longest, about twice as long as 2, and a little longer than $4+5+6$. 4 shortest, then 5 and 1 about or nearly equal. 6 about as long as 2. Formula 3(26)(15)4. 1, 2 and 3 each with a long hair near the end; 6 with many hairs.

Hab., on *Cattleya* in greenhouse at Ottawa, Canada (C. E. F.), Dec. 15, 1894. Sent by Mr. J. Fletcher. The native country of the species is unknown, but it is most probably neotropical.

This interesting species looks very like the common *L. hesperidum*, but in its tessellated skin more resembles such species as *L. depressum*. The tessellation is microscopical, so the species could not be taken for *L. perforatum* as *tessellatum*. With it were sent (also in alcohol) three or four examples of an *Anilacaspis* from the same plant. No satisfactory study could be made of this from the material received, but it appears to be *A. boisduvalii*, (Signoret).

(2). *Lecanium lintneri*, Ckll. and Bennett, n. sp.—♀ scale very flat, practically circular in outline, about $5\frac{1}{2}$ mm. long and 5 broad; dark

¹ Edited by Clarence M. Weed, Durham, N. H.

chestnut brown, shiny, subreticulately wrinkled. Removed from the bark it leaves a rather indistinct white patch.

♀ "Derm orange-yellow, with gland orifices. Marginal hairs short, scattered.

"Antennæ seven-pointed, 7th joint about $\frac{1}{2}$ longer than 1st, emitting 4 or 5 long hairs. 1, very broad, a little broader than long. 2, about as long as 1 is broad, 3 a little longer than 2; 4 a little longer than 3, the point between 3 and 4 being almost indistinguishable, causing 3 and 4 to appear as one long joint. 5, two-thirds as long as 2. 6, a little longer than 5. Formula 4(73)2165.

"Legs: coxa short, broad, has one hair; trochanter almost as long as coxa; femur 2 times as long as coxa; tibia $\frac{3}{4}$ as long as femur; tarsus shorter than tibia. Claw small, not curved. Big knobbed digitule on tarsus larger and thicker than on claw. Anal ring with long hairs, perhaps only 6." (Joseph Bennett, MS.)

Hab.—On Sassfras, Lake Mohonk, Greene Co., N. Y., June 15, 1894. Found by Dr. Lintner, to whom it is dedicated in recognition of his great services to N. Y. Entomology. The material was small in amount, and were the species not so very distinct from anything yet described I should hesitate to publish it. The scale is not very unlike that of some *Pulvinaria*, but there is no ovisac, though young had been produced by the specimens examined. *Lecanium tulipiferae* Cook, as figured by its author, looks as if it might possibly be this species; but the figures are bad, and I have received from Mr. L. O. Howard good specimens of *tulipiferae*, from Virginia. These specimens show that *tulipiferae* resembles such forms as *tiliae* and *æsculi*, and has nothing to do with *lintneri*.

Most of the description was written by Mr. Bennett, a former student of mine.

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A new Trombidian.²—The accompanying plate XXII shows a new North American trombidian which the writer found on the feathers of the black flycatcher (*Phænopepla nitus* Sev.) from Casa Grande, Arizona. By way of introduction some notes about this species may be outlined before the more detailed description is given, which is left till the last. This mite appeared on the surface of the plumage of two dried skins of the above bird, which had been laid away after separating from the flesh, for a time enclosed in paper cylinders. This fact

² Read before the Entomological Section of the Chicago Academy of Sciences, January 18th, 1895.

is mentioned as they proved useful in preserving the mites which had previous to their death made their way to the surface of the feathers. In the uncovered skin, moreover, parasites make an effort to crawl away or are lost in handling. It is not known on what part of the tissues of the bird the present species of parasite inhabits, but from the knowledge given to us by the writers mentioned further on, we may infer that either the connective tissue or the feather furnishes its nourishment, or, perhaps, as in the case with some other members of trombidians (Cheyletinae) they may feed upon the other forms of parasites which frequently live upon the same bird. All this is speculative with relation to the new species under consideration as we have not had as yet an opportunity of personally examining living specimens.

On the shining black back ground of feathers this mite appears as minute whitish specks distributed quite generally over the body of the two birds seen. They are easily removed with the point of a needle to which they can be made to adhere by mere contact, by reason of the long hairs which is such a characteristic feature of the example before us. By reason of this also I have given it the name *villosa*. Transferred to the slide of the microscope they are seen to be shrivelled and of course lifeless. An immersion in pure glycerine caused the tissues to regain to a striking extent what would apparently be the natural rotund appearance of life. Some twelve specimens of both sexes gathered from the birds were studied, the most of these being matured individuals. Selecting one which was characteristic, I made the drawing of the female referred to in the beginning of this paper. While a number of species have been described, from time to time, the literature is not extensive and that which interests us most in the present connection is foreign. In 1878 G. Haller³ found a remarkable vermicular shaped trombidian in the connective tissue of the ash-colored woodpecker (*Picus canus*) and described it under the generic and specific appellation *Picobia heerii*. In the following year 1879, A. Heller of Kiel, found similar forms inside the feathers of poultry, pigeons, and peacocks. To all appearances these Acarina all belong to the same genus *Picobia* notwithstanding the latter observer described two new species under a newly created genus to which the name *Syringophilus* was given. We could not pass without mentioning this as we think the new form here described, for the first time, enters into the genus *Picobia* of Haller, while it resembles, as far as description goes, to some extent the species *Picobia (Syringophilus) uncinata* Heller.⁴

³ Freyana and *Picobia* Zutschrift fur wissenschaftliche, Zoologie, XXX, 1878, p. 81.

⁴ Die Schmarotzer, 1880, p. 186.

Description of *Picobia villosa*, sp. nov.—Length of body, male .7 mm. breadth .20 mm. The female is slightly larger. Body elongated, rather rotund; palpi abbreviated; legs strong with five joints; tarsus of all the legs terminating in two chitinous Ctenidium or comb-like structures, the body of the latter thickened, convexed on the outer side straighter on side giving origin to the teeth, at point of attachment to tarsus the diameter is lessened and becomes rounded between the claws, the teeth constituting the comb are graduated in length being longest at free end, becoming shorter toward the articulation as shown in Fig. 2, the teeth are also notched at their extremities the last tooth of the fourth pair having six denticles. Within the end of the tarsus, on each side, is inserted, by a stalk, an accessory delicate hyaline vertically flattened appendage, see Fig. 2a, it is split up a part of the way into about nine sharp terminations which divaricate slightly; they project to the outer side of the claws, their ends overhanging like fringe. At the end of the tarsus, corresponding to a point at the base of the combs, two curved claws are present as shown in Fig. 2. To the naked eye the body of this mite is whitish. Through the microscope it appears almost transparent except where food masses occur in the abdomen. A number of blackish hairs are found, on the legs, body, and especially at the end of the abdomen where some, here, attain an extraordinary length. In the plate these are curved so as not to take up unnecessary room.

EXPLANATION OF PLATE XXII.

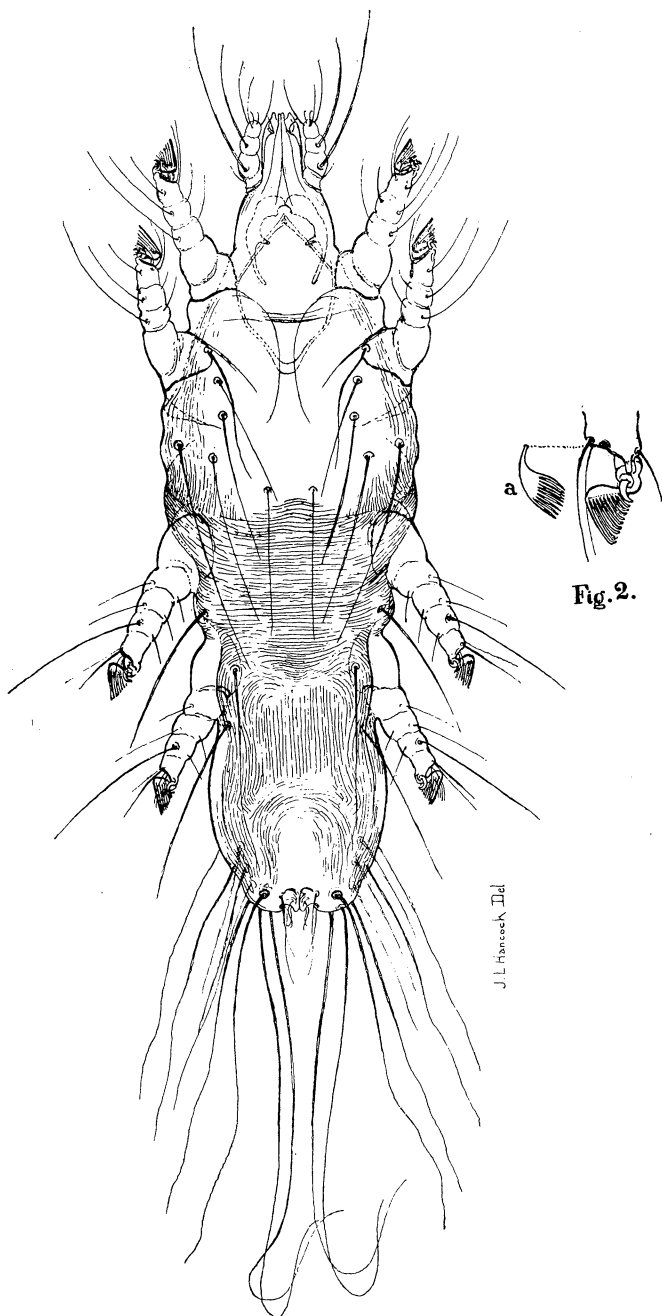
Fig. 1. *Picobia villosa* Hancock, original, greatly magnified, semi-transparent view.

Fig. 2. Tarsus seen from the side showing comb structures, the claws, and accessory stalked appendage (shown at a).

Chicago.

JOSEPH L. HANCOCK.

PLATE XXII.



J. L. Hancock Del.

Fig. 1.
Hancock on Picobia.